



# **City & Guilds Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting (0039-20)**

Version 1.5 (February 2025)

**Qualification Handbook**

## Qualification at a glance

<b>Subject area</b>	Chainsaw and Related Operations
<b>City &amp; Guilds number</b>	0039-20
<b>Age group</b>	16+
<b>Entry requirements</b>	Candidates must meet minimum age requirements. Centres must ensure that any pre-requisites stated in the <i>What is this qualification about?</i> section are met.
<b>Assessment</b>	To gain this qualification, candidates must successfully achieve the following assessments: <ul style="list-style-type: none"> <li>one to one practical assessment with oral questioning by an NPTC City &amp; Guilds approved assessor.</li> </ul>
<b>Grading</b>	Met/not met
<b>Approvals</b>	Full centre approval Qualification approval
<b>Support materials</b>	Qualification Handbook (candidates) Assessment materials (approved assessment centres only)
<b>Registration and certification</b>	Consult the Walled Garden/Online Catalogue for last registration and certification dates.

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds NPTC Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting	0020-20	603/7353/2	16	19

Version and date	Change detail	Section
1.0 October 2021	First version	
1.1 October 2021	City & Guilds added to qualification title	
1.2 April 2022	GLH and TQT clarified	Structure
1.3 August 2022	Formatting changes Updated logo Updated 'Sources of general information'	Throughout Front cover Appendix 1
1.4 October 2024	Formatting changes	Throughout
1.5 March 2025	Updated Quality Assurance Updated Inclusion and Diversity Updated Sustainability	Throughout

# Contents

<b>Qualification at a glance</b>	<b>2</b>
<b>1 Introduction</b>	<b>5</b>
<b>2 Qualification structure</b>	<b>6</b>
<b>3 Centre requirements</b>	<b>7</b>
<b>4 Delivering the qualification</b>	<b>10</b>
<b>5 Assessment</b>	<b>12</b>
<b>6 Units</b>	<b>13</b>
Unit 201 Chainsaw maintenance and cross-cutting	14
<b>Appendix 1 Sources of general information</b>	<b>26</b>

# 1 Introduction

This document tells you what you need to do to deliver the **City & Guilds Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting (0039-20)**

Area	Description
Who is the qualification for?	Individuals who climb trees as part of their work in arboriculture, forestry or other industries. It will provide the individual with the knowledge, understanding and skills required to climb trees and perform aerial rescue safely and to industry standards in line with current legislation.
What does the qualification cover?	It covers risk assessment, emergency planning, legislation, industry best practice, environmental considerations, tree condition and working at height assessments, equipment and systems, tree climbing, aerial rescue by climbing suitability, rescue plan and implementation.
What opportunities for progression are there?	This qualification will support progression into employment where tree climbing and rescue is part of the role. Safe operational skills are key to efficient use, good working practice and preventing accidents, leading to business benefits in terms of less machinery damage and down time.
Who did we develop the qualification with?	Developed with City & Guilds NPTC Stakeholders, associates and industry representatives.
Is it part of an apprenticeship framework or initiative?	No

## 2 Qualification structure

For the **City & Guilds Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting (0039-20)** learners must be trained and assessed in the unit listed below. The qualification will be endorsed to the context of the unit assessed:

City & Guilds unit number	Unit title	GLH
<b>Mandatory unit:</b>		
Learners must achieve or must have achieved this mandatory unit.		
201	Chainsaw maintenance and cross-cutting	16

### Total Qualification Time

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to achieve and demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT consists of the following two elements:

- the number of hours which an awarding organisation has assigned to a qualification for Guided Learning, and
- an estimate of the number of hours a Learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by - but, unlike Guided Learning, not under the Immediate Guidance or Supervision of - a lecturer, supervisor, tutor or other, appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 2 Certificate of Competence in Chainsaw Maintenance and Cross-Cutting (0039-20)	16	19

## 3 Centre requirements

### Approval

#### Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval process: Quality Standards** for further information. Please email [qasupport@cityandguilds.com](mailto:qasupport@cityandguilds.com) for further information on the approval process.

### Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following requirements:

- be technically competent in the areas in which they are delivering
- be able to deliver across the breadth and depth of the content of the qualification being taught
- have recent relevant teaching and assessment experience in the specific area they will be teaching, or be working towards this
- demonstrate continuing CPD.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before delivering a course programme.

### Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessments.

### Assessment Guidance for the Assessor

Staff assessing these qualifications must be approved Certificate of Competence City & Guilds NPTC Assessors and must be independent and cannot have been involved with the training of the Candidate. This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body.

Certificate of Competence City & Guilds NPTC Assessors must meet the following requirements:

- show competence and provide evidence of industry expertise in the qualification/s they wish to assess
- hold the qualification as a candidate and have been technically evaluated as an Assessor
- be up to date with their verification and relevant first aid
- demonstrate continuing technically relevant CPD

Compliance with these requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness and approved Assessors will be subject to a regular visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the Assessor will be evaluated by a City & Guilds approved Quality Consultant.

### **Safe Practice**

Appropriate PPE must be worn at all times All equipment must be operated in such a way that the Candidate, Assessor, other persons, animals or other equipment are not endangered.

If these conditions are not observed this will result in the Candidate not meeting the required standard.

### **Validation of Equipment**

Any item(s) equipment used for the assessment must comply with current legal requirements.

Additional information may be sought from the relevant manufacturer's instruction book, operators' manual, product label/database or any other Government/Government Agency publication.

### **Appeals and Equal opportunities**

Centres must have their own auditable, appeals procedures. If a Candidate is not satisfied with the examination conditions or a Candidate feels the opportunity for examination is being denied, the Centre Manager should, in the first instance, address the problem. If, however the problem cannot be resolved, City & Guilds will arbitrate and a Principal Verifier may be approached to offer independent advice.

All appeals must be clearly documented by the Centre Manager and made available to the Principal Verifier or City & Guilds if advice is required.

Should occasions arise when Centres are not satisfied with any aspect of the verification process, they should contact the Quality Assurance Manager at City & Guilds NPTC, 5-6 Giltspur Street, London, EC1A 9DE, UK Access to the qualification is open to all, irrespective of gender, race, creed or special needs. Subject to Health and Safety restrictions the Centre Manager should ensure that no learner is subjected to unfair discrimination on any grounds in relation to access to assessment and to the fairness of the assessment. QCA requires City & Guilds to monitor centres to check whether equal opportunities policies are being adhered to.

### **Quality assurance**

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards



Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City & Guilds Quality Assurance processes visit: the **What is CASS?** and **Quality Assurance Standards** documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- Internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, Internal Quality Assurers must

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

External quality assurance for the qualification will be provided by City & Guilds EQA process. EQAs are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

## **Learner entry requirements**

Candidates must meet minimum age requirements.

Centres must ensure that any pre-requisites stated in the *What is this qualification about?* section are met.

## **Age restrictions**

This qualification is approved for learners aged 16 or above.

## **Access arrangements and reasonable adjustments**

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the City & Guilds website: **Access arrangements and reasonable adjustments**.

## 4 Delivering the qualification

### Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification.
- any units they have already completed or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner and the responsibilities of the centre. This information can be recorded on a learning contract.

### Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

**Inclusion and diversity | City & Guilds ([cityandguilds.com](https://www.cityandguilds.com))**

### Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

**Our Pathway to Net Zero | City & Guilds ([cityandguilds.com](https://www.cityandguilds.com))**

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)
- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)
- minimising water use and considering options for reuse/salvage as part of plumbing activities wherever possible.

## Support materials

The following resources are available for this qualification:

Description	How to access
Candidate Handbook	<a href="http://www.nptc.org.uk">www.nptc.org.uk</a>
Assessment Pack (available only to assessors)	<a href="http://www.nptc.org.uk">www.nptc.org.uk</a>

## 5 Assessment

### Assessment of the qualification

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
201	Chainsaw maintenance and cross-cutting	Oral Examination and Practical observation  Centres may use the materials provided by City & Guilds.	<a href="http://www.nptc.org.uk">www.nptc.org.uk</a>

---

### Assessment strategy

City & Guilds has written the practical observations with oral questioning to use with this qualification, live assessment materials can be downloaded by the assessor via the Assessment Pack from the NPTC website.

### Time constraints

The following must be applied to the assessment of this qualification:

- Candidates must finish their assessment within 24 months of date of initial registration
- Assessments should take no longer than 1.5 – 3 hours
- Qualification registration is valid for two years.

## 6 Units

### Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- learning outcomes, which consist of several assessment criteria

### Guidance for delivery of the units

This qualification consists of one **unit**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

<b>Level:</b>	2
<b>GLH:</b>	16
<b>Assessment type:</b>	Practical activities with oral assessment.
<b>Aim:</b>	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to carry out chainsaw maintenance and cross-cutting safely and in accordance with current legislation and industry standards.

### Learning outcome

The learner will be able to:

LO1 Carry out chainsaw maintenance (**Criteria 1.1-1.11**)

### Assessment criteria

The learner can:

- AC1.1 Risk assessment and emergency planning
- AC1.2 Operator responsibilities under the Health and Safety at Work act and Provision and Use of Work Equipment Regulations (PUWER)
- AC1.3 Providers of industry good practice
- AC1.4 Maintaining chainsaws to manufacturers recommendations
- AC1.5 Battery powered machine maintenance
- AC1.6 Function and maintenance requirements of individual components
- AC1.7 Maintaining the guide bar and chain
- AC1.8 Reassemble chainsaw and cutting system to functional and operational standard
- AC1.9 State steps to be taken when a chainsaw is not repairable, faulty or non-operational
- AC1.10 Clean and tidy working area
- AC1.11 Waste Disposal

#### Topic 1.1

The risk assessment process may contain the following five steps:

- identify the hazards
- decide who might be harmed and how
- evaluate the risks and decide on precautions
- record the findings and implement them
- review and update the assessment as necessary.

Hazards, risks and controls relevant to the site task and machine.

Emergency planning procedures relevant to a work site:

- site location
- grid reference
- what three words
- designated meeting place
- nearest access point
- street name/district
- type of access (public road/light vehicles, four-wheel drive)
- suitable helicopter landing area
- phone number of nearest doctors
- location of nearest accident and emergency hospital and phone number
- works manager contact details
- your own contact number/mobile number.

### **Topic 1.2**

Key points from the legislation and industry good practice listed below:

Health and Safety at Work Act (HASWA):

- follow training received
- take reasonable care of their own and other people's safety.

Provision and Use of Work Equipment Regulations (PUWER):

- equipment is maintained
- equipment is fit for purpose.

### **Topic 1.3**

Providers of industry good practice:

- Forest Industry Safety Accord (FISA)
- regional forestry bodies
- Arboricultural Forestry Advisory Group (AFAG)
- Arboricultural Association (AA).

### **Topic 1.4**

The importance of maintaining chainsaws to manufacturers recommendations:

- machine is safe to use
- reduces machinery repair downtime.

The function of all chainsaw safety features:

Guide bar cover:

- protects and covers the bar and chain.

Chain with low kick back characteristics:

- reduces kickback.

Exhaust:

- noise reduction and reduces emissions.

Combined chain brake and front hand guard:

- stops the chain rotating and protects the hand.

Chain catcher:

- catches a derailed chain.

Anti-vibration mounts:

- reduces vibration.

On/off switch:

- stops engine.

Safety decals-hand/eye/ear defender symbols:

- provides mandatory information.

Throttle trigger lockout:

- stops accidental throttle operation.

Rear chain breakage guard:

- protects the rear hand.

Appropriate tools for the maintenance of both the chainsaw power unit and guide bar/chain are selected.

## **Topic 1.5**

Hazards associated with battery powered equipment:

- incorrect compatibility of battery/machine
- machine being live when the battery is in place
- machine may not have an on/off switch
- battery misalignment
- battery storage
- battery disposal
- battery dislodging and falling from the machine
- electric shock
- short circuiting and combustion when charging
- malfunction due to water contamination
- lack of power
- charge time and charging requirements.

Battery power unit maintenance and checks:

- battery guide tracks are inspected and cleaned
- battery is not damaged, cracked or deformed
- battery has sufficient charge
- machine air intake and cooling system cleaned and inspected for damage
- keypad is inspected for damage and cleaned (if applicable)
- battery compartment is inspected for damage.

Benefits associated with the use of battery powered machines:



- reduced weight
- reduced vibration
- reduced noise
- no emissions
- clearer communication with others on site
- less maintenance requirements
- more accurate operation due to no engine torque
- no need for the transportation of fuel
- no risk of fuel spillages.

## Topic 1.6

Function and maintenance requirements of all individual components:

Spark plug:

- provides ignition, maintenance may include inspection, cleaning and checking of electrode gap. Comment made upon colour of spark plug deposits.

Maintenance:

- engine cover and spark plug removed
- plug cleaned or replaced as necessary
- wear/damage assessed
- gap size checked and set if necessary.

Air filter:

- prevents debris entering the carburettor and helps maintain the correct air/fuel ratio, maintenance may include inspection and thorough cleaning.

Maintenance:

- excess debris removed from around filter prior to removal
- filter removed, protecting carburettor
- filter inspected maintained and cleaned appropriate to condition
- filter refitted correctly.

Chain brake:

- stops the chain, maintenance may include inspection of the chain brake system, cleaning or replacement.

Maintenance:

- clear debris from chain brake mechanism /clutch housing
- chain brake band checked for wear.

Cooling system:

- prevents the engine from overheating, maintenance may include inspection and cleaning.

Maintenance:

- remove covers where appropriate and remove excess debris from fins and cylinder.

#### Exhaust system:

- reduces noise and emissions, maintenance may include inspection, security of nuts/bolts, spark arrestor and removal of residue.

#### Maintenance:

- check all nuts and bolts for security
- remove excess residue from the silencer
- check condition and security of spark arrestor if applicable.

#### Clutch/drive system:

- provides drive to the chain, maintenance may include inspection, cleaning and removal of the clutch.

#### Maintenance for inboard clutch:

- remove retaining clip
- dismantle sprocket assembly
- sprocket checked for wear and condition
- clean crankshaft stub and grease needle cage where appropriate
- re-assemble.

#### Maintenance for outboard clutch:

- if appropriate piston locked as per manufactures guidance
- unscrew clutch weights according to manufacturer's guidance
- clean crankshaft stub and grease needle cage where appropriate
- re-assemble.

#### Sprocket:

- drives/pushes the chain along the guide bar, maintenance may include inspection and replacement due to wear exceeding manufacturers tolerances.

#### Maintenance:

- sprocket checked for wear and condition.

#### Starter mechanism:

- engages the flywheel, maintenance may include cleaning, inspection.

#### Maintenance:

- starter cover removed and air ways cleared
- cord and coil spring tension released
- cord inspected for wear
- cord and coil spring re-tensioned
- re-coil checked to ensure spring tension is correctly applied
- pull toggle checked for security.

#### Greasing/lubrication:

- may help prevent excessive wear of components.

#### Maintenance:

- greasing of component parts as appropriate.

Fuel filter:

- prevent debris entering engine components, maintenance may include cleaning as appropriate or replacement.

Maintenance:

- fuel cap removed
- filter located and removed where applicable from tank using appropriate tool
- replacement as appropriate.

Oil filter:

- prevent debris entering guide bar, maintenance may include cleaning as appropriate or replacement.

Maintenance:

- oil cap removed
- filter located and removed where applicable from tank using appropriate tool
- condition of filter determined
- cleaning procedures using non-flammable detergents followed by rinsing and drying or replacement as appropriate.

Maintain power unit in accordance with operator's handbook using appropriate tools.

### **Topic 1.7**

The function and maintenance requirements of guide bar:

- holds and carries the chain to enable the cutting of timber.

Maintenance:

- identification of uneven and damaged rails and maintain as appropriate
- checking the straightness of bar
- checking the bar groove depth
- identification of any overheating, cracking and burring
- removal of burrs
- clearing the bar groove and oil holes
- inspecting the sprocket nose for security and condition
- greasing the bar nose sprocket if applicable
- turning the bar following maintenance to reduce wear.

Maintain guide bar in accordance with operator's handbook using appropriate tools.

Problems that may be encountered when a chain and guide bar is worn, damaged or poorly maintained:

- chainsaw does not cut in a straight line
- over-heating of the guide bar
- poor lubrication of the chain
- increased chain, bar and sprocket wear.

The information required to replace the chainsaw chain:

- pitch
- gauge

- length of guide bar
- number of drive links
- cutter type.

Cutter types:

- chisel chain
- semi-chisel chain.

Application may depend on experience of the operator, timber type and personal preference.

The correct file size and identify the required sharpening angles through use of chain charts, manufactures information, chain box etc.

Reasons for maintaining correct filing angles and cutter lengths:

- ensures chain is sharpened as per manufacturers recommendations
- enhances cutting performance
- decreased vibration
- accurate cutting
- decreased risk of kick back.

The correct depth gauge setting:

- achieves optimum cutting speed as per manufacturers' recommendations
- reduces the risk of kick back
- reduces chain vibration.

Function of the chain:

- carries the cutting components to enable the cutting of timber.

Maintenance of the chain:

- checking cutters for damage and selecting the first cutter to sharpen
- having the chain secured in a chain vice or on bar in a bench vice or timber vice
- selecting and using a file of the correct size with a handle fitted to sharpen all of the cutters
- maintenance of top and side plate angles throughout sharpening of the whole chain
- ensuring a consistent cutter length is maintained
- removing burrs when applicable
- maintaining the height and profile of depth gauges.

## **Topic 1.8**

Upon completion of maintenance activities, the chainsaw including the bar and chain is reassembled in line with the operator's handbook.

## **Topic 1.9**

Steps to take when a chainsaw is not repairable, faulty or non-operational:

- labelling of the chainsaw and removing from service
- operator maintenance
- arranging for repair of the chainsaw.

### Topic 1.10

Maintenance area is left in a clean and tidy state with tools and equipment appropriately cleared away.

### Topic 1.11

Disposal of waste from maintenance activities:

- use of designated waste/recycle bins
- waste oils placed in approved containers for disposal.

All waste produced from maintenance activities is disposed of in line with legislation, good practice and/or site requirements.

---

## Learning outcome

The learner will:

LO2 Carry out cross-cutting with a chainsaw (**Criteria 2.1 – 2.6**)

## Assessment criteria

The learner can:

AC2.1 Personal protective equipment, hazards, risks and emergency planning

AC2.2 Biosecurity and environmental considerations

AC2.3 Cross-cutting timber

AC2.4 Moving and stacking timber

AC2.5 Waste disposal

AC2.6 Working methods and considerations

### Topic 2.1

Appropriate and compliant Personal Protective Equipment (PPE) for chainsaw operations:

- chainsaw safety leg protection
- chainsaw safety footwear
- safety helmet
- eye and ear protection
- gloves appropriate for the task
- non-snag outer clothing
- each person should carry a personal first aid kit
- all PPE should conform to CE/EN standards.

Hazards, risks and controls relevant to the site task and machine.

Emergency procedures relevant to the work site .

Safe working distance:

- five metres or twice the length of the longest product.

## Topic 2.2

Routine bio-security controls:

- disinfection/ cleaning of equipment
- cleaning/disposal of PPE.

Environmental considerations:

- fuelling site
- type of fuel/oil
- use of battery powered saws.

## Topic 2.3

Pre-start checks and setting of the machine:

- chain tension and condition checked for safe and effective use
- safety features checked for condition and function
- external nuts and bolts checked for security
- chainsaw contains sufficient fuel and chain oil for operations
- battery saw contains sufficient oil and charge.

Chainsaw is checked, started and function tested ready for use in accordance with manufacturer's information

Tension is found:

- on the outside edge of strained timber and when cut, the kerf opens.

Compression is found:

- on the inside edge of strained timber and when cut, the kerf closes.

Procedure for removing a trapped saw removal:

- first switch off engine and/or apply chain brake
- lever the timber to open the cut
- drive a wedge into the closed kerf
- withdraw the saw
- use another saw to free the trapped saw cutting the timber at least 300mm (12") from the trapped saw.

Methods of cross-cutting timber:

Timber under no tension or compression:

- single cut through to sever timber
- partially cut through timber turn timber and sever.

Timber under tension and compression:

- release compression in timber then cut through tension
- bore cuts to initiate either tension or compression cuts.

Timber under extreme tension/compression:

- multiple tension cuts
- multiple compression cuts.

Timber above guide bar length:

- use a larger saw/guide bar
- use of reduction cut
- cut from both sides.

Crosscutting of timber to length:

- ensuring appropriate safe working distances from both fuel and other operators is maintained
- correct use of PPE
- timber is in a safe and appropriate position
- safe starting procedure adopted.

Safe stance adopted including:

- legs and feet are clear of the chain
- chainsaw is stable/secure/supported during crosscutting
- minimal risk of muscular/skeletal injury
- bar aligned to maintain accuracy
- head out of alignment with the bar and chain
- use of throttle to cut safely and efficiently
- cutting techniques employed to complete severance of timber
- appropriate boring technique used if applicable
- sequence of cuts undertaken to prevent saw becoming trapped
- appropriate aids used for lifting, rolling or levering if applicable
- accuracy of measurement within site specification and reasonable tolerances
- tension and compression cuts should meet
- chain brake used appropriately
- saw switched off and left in safe position, bar cover replaced if appropriate.

Appropriate boring cuts to sever timber.

Ergonomic working methods may be applied by:

- providing work areas at a comfortable height to avoid stooping
- operators working in a pattern to prevent unnecessary repetitive movements
- attempting to replace manual labour with machinery use where possible.

## **Topic 2.4**

Moving timber safely:

- use of safe lifting techniques
- moving timber within the operators personal lifting capacity
- moving lightest to the heaviest
- use of safe lifting techniques
- dragging
- rolling
- aid tools
- machine.

Considerations for stacking timber:

- extraction method
- species
- length/diameter
- product specific.

Uncontrolled timber movement may be avoided by:

- ensuring manual stacking does not exceed one metre in height
- using site features such as tree stumps to brace timber behind
- avoiding stacking of timber on steep slopes or unsecured ground
- appropriate signage.

Stacking of timber should:

- use of appropriate aids to handle / move products
- correct stance during lifting
- avoiding excessive lifting by levering, sliding, rolling
- quality of stacking must be to an agreed job specification
- tidy stacking of timber
- position of stack appropriate to method of extraction
- manually constructed stacks are limited to one metre high.

Timber should be left in a safe, stable condition and appropriate position.

### **Topic 2.5**

All waste produced is disposed of in line with legislation, good practice and site requirements.

All tools, equipment and personal protective equipment is used in line with industry good practice

### **Topic 2.6**

It is ensured that any possible environmental damage is always minimised during chainsaw maintenance activities.

All activities must be completed in a way which protects the operator and those around them.



## Supporting information

### Evidence requirements

One to one practical assessment with oral questioning by an NPTC City & Guilds approved assessor.

### Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

### Safe Practice

Assessors must hold a current 'First Aid at Work' Certificate.

It is strongly recommended that Candidates hold at least a recent, recognised 'Emergency First Aid' Training Certificate.

Appropriate Personal Protective Equipment (PPE) must be worn at all times.

A First Aid kit meeting current regulations, of the appropriate size for the number of persons on site, must be available.

The Assessor must ensure a Risk Assessment is carried out, and sufficient control measures implemented.

All equipment being used for this assessment must comply with relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998 and Lifting Operations and Lifting Equipment Regulations (LOLER) 1998.

Information may be sought from the relevant operator manuals or any other appropriate training or safety publication.

Provision must be made to avoid the risk of environmental pollution and adequate control measures must be implemented (a suitable response kit to be available on the machine).

It is the responsibility of the Assessor and the Candidate to ensure that any additional requirements and provisions are met as relevant to this qualification.

Candidates must comply with current regulations when working at heights regulations 2005 amended

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard.

**Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.**

### Suggested learning resources

Manufacturers' handbooks, manuals.

Safety bulletins.

## Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centre Document Library** on [www.cityandguilds.com](http://www.cityandguilds.com) or click on the links below:

### **Quality Assurance Standards: Centre Handbook**

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

### **Quality Assurance Standards: Centre Assessment**

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

### **Access arrangements - When and how applications need to be made to City & Guilds**

provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **Centre Document Library** also contains useful information on such things as:

- Conducting examinations
- Registering learners
- Appeals and malpractice

### **Useful contacts**

Please visit the Contact Us section of the City & Guilds website, **Contact us**.

## **About City & Guilds**

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

## **City & Guilds Group**

The City & Guilds Group is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

The Group is made up of City & Guilds, ILM, Kineo, The Oxford Group, Gen2, and Intertrain. Together we set the standard for professional and technical education and corporate learning and development around the world.

## **Copyright**

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute and may not be copied, reproduced or distributed without prior written consent. However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification.

The Standard Copying Conditions (see the City & Guilds website) also apply.

Published by City & Guilds, a registered charity established to promote education and training

City & Guilds  
Giltspur House  
5-6 Giltspur Street  
London  
EC1A 9DE

**cityandguilds.com**